

REMARKS/ARGUMENTS

The Office Action mailed March 9, 2006 has been reviewed and carefully considered. Claims 8-14 are pending in this application, with claim 8 being the only independent claim. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

Claim Amendments

Independent claim 8 is amended to recite "monitoring at least one monitored signal from each of the inphase component and the quadrature component that are passed through the secondary control loop for the presence of the test signals; and generating an error message if the amplitude of a signal derived from one of the at least one monitored signal is below a predetermined value". Support for this amended feature is found on page 2, lines 16-19, which states that the measurement signals from the components (i.e., the inphase and quadrature components) are synchronously demodulated, and page 6, lines 5-8, which describes how the presence of the test signals is established.

Dependent claims 9-13 are amended to be consistent with the changes to independent claim 8 and to correct minor typographical errors.

Rejection of claims under 35 U.S.C. §112, first paragraph

Claims 8-14 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner alleges that the specification does not indicate what is integrated to provide a single input value to the threshold circuit 49. As will be described below, the specification indicates that each of the inputs to the multiplexer 46, i.e., measurements signals from the inphase and quadrature components, is synchronously integrated over a period of time.

The multiplexer 46 in Fig. 2 of the present specification receives four inputs and has one output. As is known to those skilled in the art, a multiplexer allows transmission of multiple signals over a single channel. This may be accomplished, for example, by time division multiplexing in which a plurality of inputs are distributed (interleaved) in given time periods in a defined repeated sequence in the output channel. Another example of multiplexing is frequency division multiplexing. Accordingly, one skilled in the art would understand that the output of the multiplexer includes all of the input signals interleaved by either time or frequency. Furthermore, the specification discloses that the measurements signals are synchronously demodulated (see page 2, lines 16-19; and page 6, lines 1-3, of the original specification). Thus, the specification clearly describes that each of the signals are demodulated. Page 6, lines 5-8 of the original specification further states that the "presence of the test signal is established by virtue of the respective integral exceeding a prescribed threshold". The use of the term "respective integral" indicates that each of the synchronous demodulated measurement signals is separately integrated. In view of the above remarks, the specification clearly indicates that each of the signals entering the integrator 48 is integrated.

The Examiner further asks how the monitored test signal is obtained for comparison with the predetermined value. As described above, the specification clearly states that measurement signals are tapped from the inphase and quadrature components and supplied to the multiplexer 46 which interleaves the input signals into one output. The output of the multiplexer 46 is connected to a multiplier 47 which serves as a synchronous demodulator for synchronously demodulating each of the interleaved output signals from the multiplexer (page 6, lines 1-3, of the original specification). Each of these demodulated signals is integrated over a period of time and the output of the integrator is compared to the predetermined value (page 6,

lines 3-5, of the original specification). In view of the above remarks, the specification clearly indicates how the value is obtained for comparison with the predetermined value. Accordingly, the rejection of claims 8-14 under 35 U.S.C. §112, first paragraph is overcome.

Rejection of claims under 35 U.S.C. §112, second paragraph

Claims 8-14 are also rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The term “of” in the second to last line of claim 8 is changed to --if-- as suggested by the Examiner. Furthermore, claim 8 now recites “generating an error message if the amplitude of a signal derived from one of the at least one monitored test signal is below a predetermined value”. This is consistent with the specification which describes that an integral of the demodulated monitored signal is compared to a predetermined value. Furthermore, please note that the use of an integrator is a preferred embodiment and is not a principle part of the invention (see page 2, lines 30-38).

In view of the above amendments and remarks, the rejections under 35 U.S.C. §112, second paragraph, are overcome.

The application is deemed to be in condition for allowance and notice to that effect is solicited.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,
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Dated: June 9, 2006